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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,372	10/28/2003	Michael A. Urbancic	20031009-003	5316

34160 7590 11/30/2006

SUD-CHEMIE INC.
1600 WEST HILL STREET
LOUISVILLE, KY 40210

EXAMINER	
BULLOCK, IN SUK C	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/695,372	URBANCIC ET AL.	
	Examiner	Art Unit	
	In Suk Bullock	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 13-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 & 13-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Claim 12, containing the trademark/trade name Catofin ®, has been canceled. Thus, claims 1-11 and 13-20 remain in this pending application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-11 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Houdry (US 2,419,997) and Herbstman (US 4,409,417).

Through the use of the Jepson claim format, applicants admit that steps (a)-(f) are prior art.

The cycle extension and hydrogen introduction are not admitted as being prior art.

The Houdry reference discloses that time of contact can be changed during operation in order to balance heat. Time is necessarily measured in units such as second and minutes. See column 2, line 58 through column 3, line 51.

The Herbstman reference discloses the presence of hydrogen during dehydrogenation. See column 3, line 55 through column 4, line 23.

It would have been obvious to one having ordinary skill in the art to change contact time during the reaction as suggested by Houdry because changing this time changes the heat balance. Changing the time so that it is longer would necessarily result in a delay in the process that would affect all aspects of the process.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the prior art by including hydrogen in the amounts claimed in the process as suggested by Herbstman because formation of carbonaceous deposits will be reduced.

Response to Arguments

Applicants' arguments filed 9/22/2006 have been fully considered but they are not persuasive.

Applicants argue, "The '997 patent does not teach or suggest that the reaction cycle time, including the contact time, can be increased without reducing the temperature of the catalyst bed. Nor does the '997 patent teach or suggest that hydrogen can be added to the catalyst bed with the hydrocarbon that is to be dehydrogenated." The argument is not persuasive because none of the claims recite increasing the cycle time without reducing the temperature, i.e., maintaining the catalyst bed temperature while increasing the cycle time. The claims as presently recited are not patentably distinguishable from the Houdry reference which discloses all the limitations recited therein including changing the contact time in order to balance the heat.

The examiner does not dispute that "the '997 patent does not teach or suggest that hydrogen can be added to the catalyst bed with the hydrocarbon that is to be dehydrogenated." To supply this missing feature from the '997 patent, Herbstman reference was relied upon.

Applicants argue that Herbstman "does not teach or suggest that hydrogen can be added to the dehydrogenation reaction without the simultaneous addition of ammonia." It is noted that the present claimed invention does not exclude adding ammonia.

Applicants argue that "the addition of hydrogen with the hydrocarbon to be dehydrogenated would not be expected to affect the cycle time in a Houdry dehydrogenation reaction – as is required by independent claims 1,13 and 18 of the present application - ." The argument is not found persuasive because nowhere in the claims is there a recitation that the cycle length is extended by adding hydrogen to the reaction zone.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to In Suk Bullock whose telephone number is 571-272-5954. The examiner can normally be reached on Monday - Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J. Bullock

I.B.

Glenn Caldarola
Supervisory Patent Examiner
Art Group 1700